Rhododendron maxiongense (Ericaceae), a New Species from Yunnan, China

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ABSTRACT. Rhododendron maxiongense C.-Q. Zhang & D. Paterson (Ericaceae), from Yunnan, China, is described as new. It is similar to R. aberconwayi Cowan, which has elliptical thick and coriaceous leaves with recurved margins that are not undulate and have red punctate hair. The calyx of R. aberconwayi is sparsely hairy and glandular-ciliate; the corolla is open-campanulate, white to pale rose, with purple flecks; the pedicels are sparsely hairy and stipitate-glandular; and there is pilus on the base of the stamen. Rhododendron maxiongense differs from R. aberconwayi in its habitat as a dwarf shrub 0.6 to 0.9 m in height; leaves with undulated recurved margins without red punctate hair; inflorescence 8- to 13-flowered; corolla white, without flecks, apex pale green or pale rose, and lobe apex acute; stamens glabrous; calyx densely hairy; and pedicels densely hairy.

Key words: China, Ericaceae, Rhododendron, Yunnan.

Rhododendron L. is a large genus of the Ericaceae containing approximately 960 species worldwide, of which about 542 species (not including subspecies and varieties) are distributed in the wild in western China (Fang, 1999), with 227 species in Yunnan (Fang, 1999) (Cullen, 1980; Chamberlain, 1982; Mei & Fang, 1986). H. Sleumer divided the genus into 8 subgenera, but J. Cullen and D. F. Chamberlain divided it into 5 subgenera.

When investigating plants of *Rhododendron* in Maxiongshan, northeast Yunnan, southwest China, in May 2000, some specimens were collected and all but one was identified. After studying the unidentified specimen and literature, and checking other specimens deposited in KUN, we believe it represents a new species within subsection *Irrorata* of subgenus *Hymenanthes*. Subsection *Irrorata* contains 21 species in China, of which 16 are

found in Yunnan (Hu & Fang, 1994; Chamberlain, 1982).

Rhododendron maxiongense C.-Q. Zhang & D. Paterson, sp. nov. TYPE: China. Yunnan: Zhanyi Maxiongshan, 25°35′N, 103°50′E, 2440 m, 6 May 2001, *C.-Q. Zhang 2001–01* (holotype, KUN). Figure 1.

Species affinis *R. aberconwayi*, sed pumilo frutice 0.6–0.9 m, foliis rubris puncticulosis trichomatibus carentibus, inflorescentiis 8–13-floris, purpureis punctis carentibus, apice viridi-albo vel rubello, calyce velato confertim pilis, staminibus glabrescentibus, differt.

Dwarf shrub 0.6-0.9 m high; young shoots sparsely tomentose or glandular, bark glabrous, leaves clustering at the end of shoots; leaf blades elliptic or ovate-elliptic, thick and coriaceous, 3-6 × 1.2–2.5 cm, apex acute or mucronate, base nearly rounded, margin undulate and recurved; upper blade surface green, glabrous, lower blade surface pale green; midrib strongly sunken above and raised beneath, lateral veins in 10 to 13 pairs, sunken on upper surface and raised beneath; blade petioles 0.7-1 cm, grooved above, with densely glandular hair; racemose umbellate inflorescences 8- to 13-flowered, rachis ca. 1-2 cm with white trichomes; pedicels 0.8-2 cm, with densely white glandular trichomes; calyx lobes 5, triangular, 1-2 mm, densely hairy, glandular-ciliate. Corolla opencampanulate, 1.5-2 cm long, diameter at mouth 2-4.5 cm, lacking nectar pouches, glabrous within, white, without dots, apex pale green or pale rose; corolla lobes 5, apex acute, $1-1.2 \times 1.4-1.6$ cm; stamens 10, glabrous, anthers long-rounded, ca. 2 mm long, ovary conical, ca. 3.5 × 3 mm, densely glandular, style shorter than corolla, 1.3-1.7 cm long, glandular throughout, stigma pale green or pale rose, capsule unseen.

Distribution. Rhododendron maxiongense is

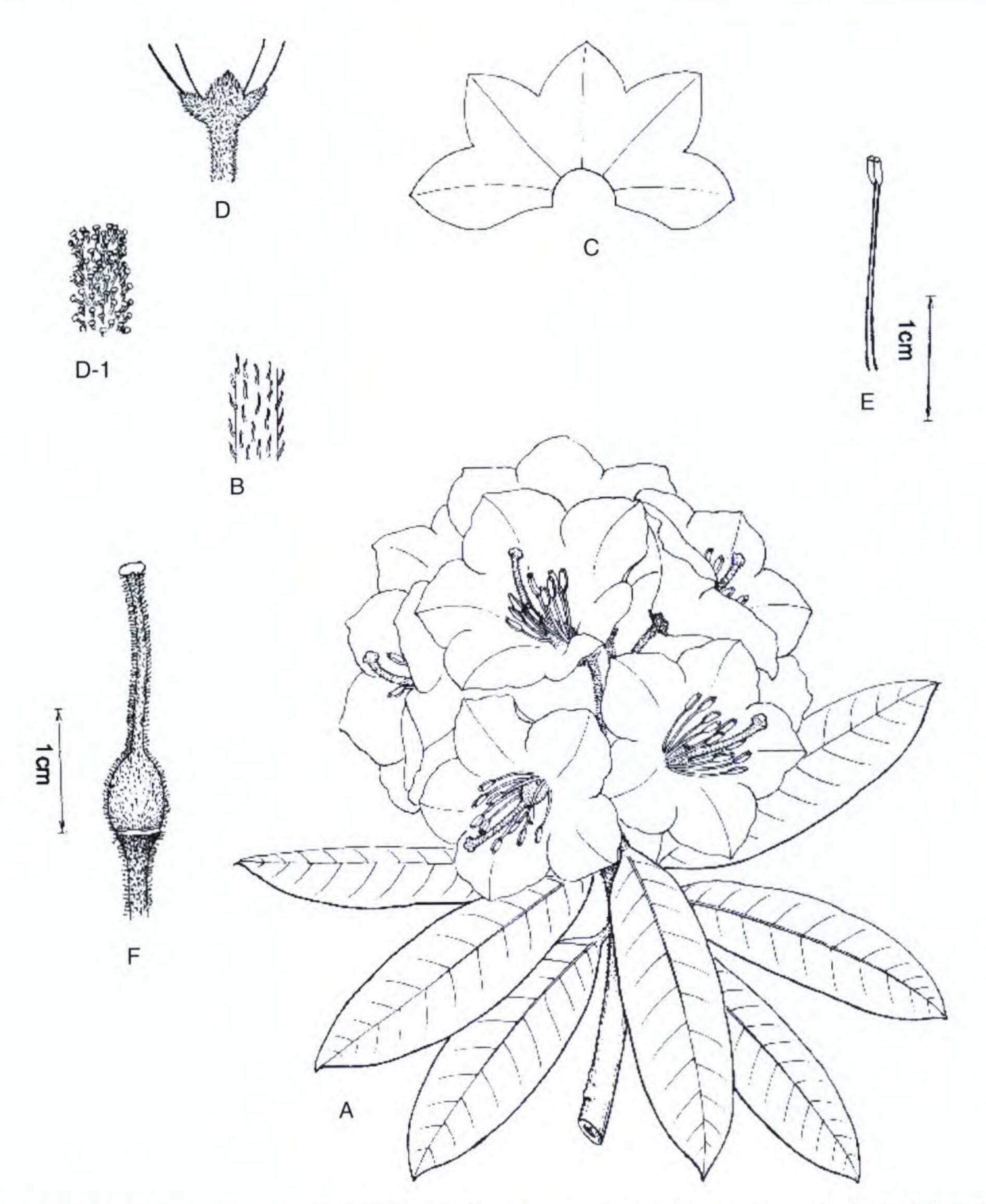


Figure 1. Rhododendron maxiongense C.-Q. Zhang & D. Paterson. —A. Inflorescence. —B. Petiole showing setose glandular hair. —C. Acute apex of corolla lobes. —D. Pedicel and calyx hair. —D-1. Pedicel glandular hair. —E. Stamen. —F. Gynoecium. All drawn from the type collection, C. Q. Zhang 2001—01, by Yang jian-kun.

known only from Zhanyi County, northeast Yunnan, China. This species grows on slopes of open *Pinus yunnanensis* Franchet var. *pygmaea* (J. R. Xue) J. R. Xue forests at 2440 m above sea level.

Rhododendron maxiongense resembles R. aberconwayi: both are evergreen shrubs with open-campanulate flowers, from northwest Yunnan, China. However, the latter species differs in its larger habit (1.5 to 2.5 m high); inflorescence with 6 to 12 flowers, and its corolla with purple flecks inside and emarginated lobes; the base of the stamen has pilus.

Morphologically, Rhododendron maxiongense, R.

aberconwayi, and 17 other species including R. irrorata Franchet and R. agastum Balfour f. & W. W. Smith all belong to subsection Irrorata. These are shrubs or small trees; bark rough; young shoots stipitate-glandular; leaves ovate to elliptic or oblong, lower surface usually glabrous when mature but with persistent punctate base with a thin veil of dendroid hairs embedded in a surface film; inflorescence lax or dense, 4- to 20-flowered; rhachis 5–10(–35) mm, calyx minute or cupular, with broad lobes and up to 6 mm long. Corolla 5- to 7-lobed, tubular to open-campanulate, with or without nectar pouches, white (rarely yellow) to mauve or deep

crimson, usually with darker flecks and stipitate-glandular; style glabrous or glandular to tip (Sleumer, 1949). This subsection comprises about 21 species in China, 16 in Yunnan (Hu & Fang, 1994; Chamberlain, 1982).

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Literature Cited

Chamberlain, D. F. 1982. A revision of *Rhododendron* II. Subgenus *Hymenanthes*. Notes Roy. Bot. Gard. Edinburgh 39(2): 209–486.

Cullen, J. 1980. A revision of *Rhododendron* subgenus *Rhododendron* sections *Rhododendron* & *Pogonanthum*. Notes Roy. Bot. Gard. Edinburgh 39(1): 1–207.

Fang, Rh. Ch. 1999. Flora Reipublicae Popularis Sinicae, Tomus 57(1). Science Press, Beijing.

Hu, L. Ch.& M. Y. Fang. 1994. Flora Reipublicae Popularis Sinicae, Tomus 57(2). Science Press, Beijing.

Mei, T. L & Fang Ruicheng. 1986. Flora Yunnanica, Tomus 4. Science Press, Beijing.

Sleumer, H. 1949. Ein System der Gattung Rhododendron. Bot. Jahrb. 74: 511–533.